CLAIMS

What is claimed is:

1. A method comprising:

receiving a plurality of constituting elements of a data structure;

determining occurrence frequency of each unique constituting element in said data structure;

assigning a cookie representation to each of said unique constituting elements based at least in part on the occurrence frequencies of said unique constituting elements; and

transmitting said data structure implicitly in a substantively equivalent form that allows a receiver of said data structure in said substantively equivalent form to be able to reconstitute the data structure using said occurrence frequency based cookie representations.

2. The method of claim 1, wherein said determining and assigning comprises assigning an initial cookie representation to each unique constituting element as the constituting elements are received, and tracking occurrence frequencies of the unique constituting elements, and upon receipt of all constituting elements of the data structure, re-assigning a final cookie representation for each of the unique constituting elements based on the occurrence frequencies of the unique constituting elements.

3. The method of claim 2, wherein the method further comprises ordering said unique constituting elements based on their occurrence frequencies.

4. The method of claim 2, wherein the method further comprises storing said constituting elements of the data structure as they are received, using said initial cookie representations, and subsequently replacing the stored initial cookie representations with the final cookie representations, and said transmitting comprises transmitting said constituting elements of said data structure using said final cookie representations.

5. The method of claim 4, wherein said transmitting further comprises transmitting a list of said unique constituting elements in the order of their occurrence frequencies to allow the receiver to infer the corresponding final cookie representations of the unique constituting elements.

6. The method of claim 1, wherein the cookie representations are numeric in form, with the cookie representations of the 128 most frequently occurred unique constituting elements having a size of one byte each, and the cookie representations of the next 32,640 most frequently occurred unique constituting elements having a size of two bytes each.

7. The method of claim 1, wherein said data structure is an XML data structure, and said constituting elements comprise tag names, attribute names and attribute values.

8. A method comprising:

receiving a plurality of unique constituting elements of a data structure transmitted in a pre-determined manner;

inferring a plurality of corresponding cookie representations for the received unique constituting elements in accordance with their manner of transmissions under the pre-determined manner of transmission; and

receiving the constituting elements of the data structure in a representative form.

9. The method of claim 8, wherein said inferring comprises inferring the plurality of corresponding cookie representations based on the order the unique constituting elements are transmitted.

10. The method of claim 9, wherein said inferring comprises inferring a unique one-byte numeric representation for each of the first 128 unique constituting elements transmitted, and a unique two-bytes representation for each of the next 32,460 unique constituting elements transmitted.

11. The method of claim 8, wherein the method further comprises reconstituting the constituting elements of the data structure, received in said representative form, based on the inferred cookie representations.

12. The method of claim 8, wherein said data structure is an XML data structure, and said constituting elements comprises tag names, attribute names and attribute values.

13. An apparatus comprising:

storage medium having stored therein a plurality of programming instructions designed to receive a plurality of constituting elements of a data structure, determine occurrence frequency of each unique constituting element in said data structure, assign a cookie representation to each of said unique constituting elements based at least in part on the occurrence frequencies of said unique constituting elements, and transmit said data structure implicitly in a substantively equivalent form that allows a receiver of said data structure in said substantively equivalent form to be able to reconstitute the data structure using said occurrence frequency based cookie representations; and

at least one processor coupled to the storage medium to execute the programming instructions.

14. The apparatus of claim 13, wherein said programming instructions are designed to perform said determining and assigning by assigning an initial cookie representation to each unique constituting element as the constituting elements are received, and tracking occurrence frequencies of the unique constituting elements, and upon receipt of all constituting elements of the data structure, re-assigning a final cookie representation for each of the unique constituting elements based on the occurrence frequencies of the unique constituting elements.

15. The apparatus of claim 14, wherein the programming instructions are further designed to order said unique constituting elements based on their occurrence frequencies.

16. The apparatus of claim 14, wherein the programming instructions are further designed to store said constituting elements of the data structure as they are

received, using said initial cookie representations, and subsequently replace the stored initial cookie representations with the final cookie representations, and said programming instructions perform said transmitting by transmitting said constituting elements of said data structure using said final cookie representations.

17. The apparatus of claim 16, wherein said programming instructions are further designed to transmit a list of said unique constituting elements in the order of their occurrence frequencies to allow the receiver to infer the corresponding final cookie representations of the unique constituting elements.

18. The apparatus of claim 13, wherein the programming instructions are deigned to employ cookie representations in numeric form, with the cookie representations of the 128 most frequently occurred unique constituting elements having a size of one byte each, and the cookie representations of the next 32,640 most frequently occurred unique constituting elements having a size of two bytes each.

19. The apparatus of claim 13, wherein said programming instructions are designed to perform said receive, determine, assign and transmit for an XML data structure, said constituting elements comprising tag names, attribute names and attribute values.

20. The apparatus of claim 13, wherein said apparatus is a selected one of a wireless mobile phone, a palm sized personal digital assistant, a notebook sized computer, a desktop computer, a set top box and a server.

21. An apparatus comprising:

storage medium having stored therein a plurality of programming instructions designed to receive a plurality of unique constituting elements of a data structure transmitted in a pre-determined manner, infer a plurality of corresponding cookie representations for the received unique constituting elements in accordance with their manner of transmissions under the pre-determined manner of transmission, and receive the constituting elements of the data structure in a representative form; and

at least one processor coupled to the storage medium to execute the programming instructions.

22. The apparatus of claim 21, wherein said programming instructions are designed to infer the plurality of corresponding cookie representations based on the order the unique constituting elements are transmitted.

23. The apparatus of claim 22, wherein said programming instructions are designed to infer a unique one-byte numeric representation for each of the first 128 unique constituting elements transmitted, and a unique two-bytes representation for each of the next 32,460 unique constituting elements transmitted.

24. The apparatus of claim 21, wherein said programming instructions are further designed to reconstitute the constituting elements of the data structure, received in said representative form, based on the inferred cookie representations.

25. The apparatus of claim 21, wherein said programming instructions are designed to perform said receive, infer, receive, and re-constitute for a XML data

structure, said constituting elements comprising tag names, attribute names and attribute values.

26. The apparatus of claim 21, wherein said apparatus is a selected one of a wireless mobile phone, a palm sized personal digital assistant, a notebook sized computer, a desktop computer, a set top box and a server.